

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference JAF/PB60817	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/GB2005/001241	International filing date (day/month/year) 30/03/2005	(Earliest) Priority Date (day/month/year) 02/04/2004
Applicant GLAXO GROUP LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2005/001241

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C233/43 C07C231/12 A61K31/167 A61P11/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/011416 A (THERAVANCE, INC; LINSELL, MARTIN, S; JACOBSEN, JOHN, R; KHOSSRAVI, DAV) 5 February 2004 (2004-02-05) cited in the application claim 1	8-21
A	WO 01/42193 A (ADVANCED MEDICINE, INC; MORAN, EDMUND, J; GRIFFIN, JOHN, H; CHOI, SEOK) 14 June 2001 (2001-06-14) cited in the application page 31, line 3 - line 5 page 43, line 13 page 50, line 11 - line 14 page 50, line 23 - line 25 example 12 claim 13	1,8, 12-18

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

31 May 2005

Date of mailing of the international search report

13/06/2005

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2005/001241

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GOULD P L: "SALT SELECTION FOR BASIC DRUGS" INTERNATIONAL JOURNAL OF PHARMACEUTICS, AMSTERDAM, NL, vol. 33, no. 1/3, 1986, pages 201-217, XP002074725 ISSN: 0378-5173 page 201 - page 203 -----	1,8, 12-18
A	WO 03/042164 A (THERAVANCE, INC; MORAN, EDMUND, J; JACOBSEN, JOHN, R; LEADBETTER, MICH) 22 May 2003 (2003-05-22) page 4, line 10 - page 5, line 19 examples 54,55,60,64 -----	1,8, 12-18
A	CAIRA M R: "CRYSTALLINE POLYMORPHISM OF ORGANIC COMPOUNDS" TOPICS IN CURRENT CHEMISTRY, SPRINGER, BERLIN, DE, vol. 198, 1998, pages 163-208, XP001156954 ISSN: 0340-1022 page 182 - page 184 -----	1,8, 12-18
P,X	WO 2004/106279 A (THERAVANCE, INC; STERGIADES, IOANNA; YOST, EDWARD; HUBBARD, CRISTIN; Z) 9 December 2004 (2004-12-09) cited in the application page 9, line 30 - page 10, line 6 examples 13,14 -----	1-21

INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 14 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2005/001241

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2004011416	A	05-02-2004	AU 2003259229 A1 CA 2493128 A1 EP 1532104 A1 WO 2004011416 A1 US 2005075271 A1	16-02-2004 05-02-2004 25-05-2005 05-02-2004 07-04-2005
WO 0142193	A	14-06-2001	US 6576793 B1 AT 253039 T AU 2254601 A BR 0015962 A CA 2391293 A1 CN 1402702 A CZ 20021831 A3 DE 60006280 D1 DE 60006280 T2 DK 1235787 T3 EA 4263 B1 EP 1235787 A1 ES 2208453 T3 HU 0203638 A2 JP 2003516381 T MX PA02005599 A NO 20022655 A PT 1235787 T SI 1235787 T1 SK 9922002 A3 TR 200302010 T4 WO 0142193 A1 US 2003087307 A1	10-06-2003 15-11-2003 18-06-2001 30-07-2002 14-06-2001 12-03-2003 13-11-2002 04-12-2003 29-07-2004 08-03-2004 26-02-2004 04-09-2002 16-06-2004 28-02-2003 13-05-2003 18-09-2002 05-06-2002 31-03-2004 30-04-2004 06-11-2002 21-01-2004 14-06-2001 08-05-2003
WO 03042164	A	22-05-2003	BR 0213795 A CA 2466962 A1 EP 1446379 A1 HU 0401876 A2 JP 2005509024 T WO 03042160 A1 WO 03042164 A1 US 2003153597 A1 US 6670376 B1 US 2003229058 A1 US 2004059116 A1 US 2004063755 A1	07-12-2004 22-05-2003 18-08-2004 28-12-2004 07-04-2005 22-05-2003 22-05-2003 14-08-2003 30-12-2003 11-12-2003 25-03-2004 01-04-2004
WO 2004106279	A	09-12-2004	US 2004248985 A1 WO 2004106279 A2	09-12-2004 09-12-2004